

What is claimed is:

1. A lithium ion conductive solid polymer electrolyte comprising a silylamide bond (a Si—N—Si bond) in a polymer skeleton.
2. A lithium ion conductive solid polymer electrolyte formed by the polymerization of a mixture consisting of an organic compound having at least one carbon—carbon double bond and a lithium silylamide compound.
3. The lithium ion conductive solid polymer electrolyte of claim 2, wherein the lithium silylamide compound is lithium bis(trimethylsilyl)amide.
4. A lithium secondary battery comprising a lithium ion conductive solid polymer electrolyte comprising a silylamide bond (a Si—N—Si bond) in a polymer skeleton.
5. A lithium secondary battery comprising a lithium ion conductive solid electrolyte formed by the polymerization of a mixture consisting of an organic compound having at least one carbon—carbon double bond and a lithium silylamide compound.
6. The lithium secondary battery of claim 4 or 5, comprising a lithium ion conductive solid polymer electrolyte formed by the polymerization of a mixture consisting of an organic compound having at least one carbon—carbon double bond and a lithium silylamide compound, wherein the mixture is a prepolymer and is interposed between a positive electrode and a negative electrode for joining the electrodes together.
7. The lithium secondary battery of claims 4, 5 or 6, comprising an electrode comprising a solid polymer electrolyte polymerized by the application of and drying of a mix comprising a mixture consisting of an organic compound having at least one carbon—carbon double bond and a lithium silylamide compound.

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